Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337 of the Communications Act of 1934, as amended	)	WT Docket No. 99-87
	)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies	)	RM-9332
	)	
Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz	)	RM-9405

To: The Commission

REPLY COMMENTS OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AND MRFAC, INC.

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SUMMARY

The National Association of Manufacturers and MRFAC, Inc. hereby submit their joint reply comments in WT Docket No. 99-87.

NAM/MRFAC strongly oppose the proposal by the pipeline, utility and railroad industries to appropriate over half of the frequencies historically shared with manufacturers. The industries that have historically shared frequencies below 470 MHz (pipeline, utility, forest products, telephone and manufacturers) can -- and should -- continue their traditional harmony. For this reason and those stated below, the proposal is unnecessary, is inequitable, and is unwise.

It is unnecessary because an approach is available (protected contours applied on a reciprocal basis) which can address legitimate interference concerns of the separate pool proponents; because a separate pool is not required in order to avoid auctions (since mutually-exclusive applications will not arise and private land mobile applications are generally auction-exempt); and because the solution to spectrum congestion needs to be a joint effort to secure a new allocation -- not a rob-thy-neighbor strategy.

It is inequitable because the spectrum the separate pool proponents seek is not "theirs": It has been shared for more than 40 years with U.S. manufacturers, which heavily rely on the continued availability of these frequencies.

It is unwise because it would inflict injury on U.S. manufacturers' productivity and their employees' safety -- and would have negative effects for the economy as well.

Insofar as the American Mobile Telecommunications' ("AMTA's") proposal for a UHF auction is concerned, NAM/MRFAC submit that the proposal is unworkable and unwarranted. It would cause serious dislocation and disruption to thousands of UHF licensees.

It need not be adopted inasmuch as mandatory narrow-banding (over a reasonable transition period) can accomplish the desired result.

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REPLY COMMENTS OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AND MRFAC, INC.

The National Association of Manufacturers ("NAM") and MRFAC, Inc. ("MRFAC") hereby reply to certain of the opening comments filed in the above-referenced proceeding. While there are major differences of view among the commenters, a basis exists to resolve a number of these differences in a manner that furthers sound spectrum management, protects the legitimate safety concerns of various industries -- manufacturers included -- and preserves the spectrum foundation for the extraordinary productivity gains achieved by American manufacturers over the past fifteen years.

I.

BACKGROUND

Based on a review of the opening comments, there is an overwhelming consensus for the proposition that auctions are utterly inappropriate for private radio spectrum, particularly shared spectrum below 512 MHz. Commenters as disparate as federal agencies like the Small Business Administration, small businesses like Ray's Radio Shop, Inc., multi-national corporations like The Boeing Company, MAS licensees such as Cellnet Data Systems, Inc., and state agencies such as the Maryland Transportation Authority -- all oppose auctions. If the Commission heeds these comments, as underscored by Section 309(j)(6)(E) of the Act, the agency will have resolved, consistent with the public interest and the law, most of the points of controversy affecting private radio spectrum.

Nonetheless, two principal differences remain. The first concerns the effort to create a separate pool of frequencies reserved exclusively for the use of the railroad, power and pipeline industries. In particular, Association of American Railroads ("AAR"), United Telecom Council ("UTC"), and American Petroleum Institute ("API") seek to appropriate roughly 60 percent of the frequencies historically used by US manufacturers below 470 MHz -- frequencies shared harmoniously with utilities and pipelines for more than 40 years -- and dedicate those frequencies for their sole use.

The second concerns the proposal by American Mobile Telecommunications Association ("AMTA") to create a geographic area licensing and auction regime for the 450-470 MHz band. The AMTA proposal is by its own admission "revolutionary"; indeed, it would go far beyond re-farming. However, it suffers from fundamental flaws that render it inappropriate for further consideration.

II.

DISCUSSION

A. THERE IS NO BASIS FOR A SEPARATE POOL.

The separate pool proponents present three basic arguments in support of their proposal: (1) it is necessary to prevent interference to their communications channels from other business and industrial users, interference they contend could jeopardize public safety; (2) it is necessary to avoid licensing issues arising from a mutual exclusivity of auction-exempt applications that their companies might file (it being understood that they view themselves as auction-exempt) with non-exempt applications filed by others; and (3) it would preserve their access to spectrum for new and modified systems. API at 9; UTC at 12, 26. On analysis, none of these contentions justifies a separate pool.

1. Concerns About Interference Do Not Justify a Third Pool.

Preliminarily, it is important to define terms. When the petitioners complain of "interference," they do not simply mean static -- they also mean "interference" with their ability to access new channels. That this is the case is clear from their new proposal to secure a 6 MHz carve-out above 512 MHz in the MAS, OFS and 700 MHz bands for their sole use (see, *e.g.*, Anchorage Water and Wastewater Utility); by complaints about "encroachment" on "CII spectrum" by other industrial users (Minnesota Power, Inc. at 4; Joint Comments of the Critical Infrastructure Industries at 19; UTC Reply Comments in RM-9405 at 9; American Automobile Association ("AAA") at 6 note 9); and, most basically, by their continued insistence on a separate pool below 512 MHz, notwithstanding the Second Memorandum Opinion and Order's grant of an exclusive coordination prerogative for the petitioners over any frequency ever shared

with any other industry -- a rule properly stayed by the Commission in the Fourth Memorandum Opinion and Order, FCC 99-203, released August 5, 1999.[1] The petitioners' concerns about spectrum access are addressed later in these Comments.

Nevertheless, to the extent electrical interference is a concern, there are means at hand to provide all the protection these industries could reasonably request -- without causing serious dislocation and injury to their manufacturer neighbors. Indeed, one of the proponents of a separate pool, API, itself suggested the solution in its May 19, 1997, Petition for Reconsideration in the re-farming proceeding. API maintained that its systems needed protected service contours, and that predicted overlap of interference and service contours should serve as coordination triggers for any new system that might be proposed. MRFAC agreed with this concept -- a concept that the Commission itself recently adopted for the coordination of trunked systems below 512 MHz. See Third Memorandum Opinion and Order, FCC 99-138, released July 1, 1999. There is no reason why a similar approach would not work equally well for conventional systems in the VHF and UHF bands -- if applied with reciprocity so as to protect the very heavy use that manufacturers make of frequencies long shared with the petitioners.

In particular, the Commission should adopt a notice-and-waiting period requirement applicable not just for the benefit of railroads, pipelines and power companies on shared spectrum, but also for manufacturers. If a proposed system would involve overlap of a prescribed interference contour with an incumbent's specified service contour, then notification to the incumbent's coordinator and/or the incumbent itself should be required with a reasonable

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[1] The rule is subject to reconsideration pursuant to requests filed by MRFAC and Forest Industries Telecommunications seeking the rule's replacement with an alternative, competitively neutral means of protecting pipeline et al communications. Id. at 18-19.

waiting period to allow for any objection before the application is forwarded to Gettysburg. In this fashion, concerns about the difficulties of curing interference after a new system is on the air are addressed. This approach would more than adequately protect the safety interest of the industries that have shared frequencies below 470 MHz, while at the same time respecting the continued need of each of these industries -- manufacturers included -- for access to the shared channels.

Absent reciprocity of protected contours among the industries that have shared these frequencies, the petitioners and their constituents would have no incentive not to unilaterally create a de facto exclusive pool simply by repeatedly objecting to proposals filed by manufacturers. These concerns are not idle: On the contrary, they are underscored by the petitioners' preference for "unlimited discretion to deny use of their [?] frequencies by other Industrial/Business Pool applicants" (AAA at 6 note 9),[2] and the recognition by API's own frequency coordinator (Industrial Telecommunications Association) that, if left undisturbed, the coordination policy for shared spectrum announced in the Second Memorandum Opinion and Order would create a "de facto separate pool." ITA Comments at 12. In other words, reciprocal protection ensures and respects the long-standing reliance interest of manufacturers in the availability of these shared channels.[3] Similarly, by requiring reciprocal protection among the sharing industries, no one coordinator will be advantaged or disadvantaged in the coordination

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[2] The frequencies in question are not the property of petitioners' industries. They have been shared with other industries for decades. In this regard, note that the railroads enjoy a veritable storehouse of exclusive spectrum -- over 200 channels by MRFAC's count -- making their request for preclusive access to additional spectrum they never even shared particularly troubling. Manufacturers, by contrast, had only 12 frequency pairs at 450 MHz available to them on an exclusive basis prior to consolidation and none at 150 MHz.

[3] As UTC itself has observed, the Commission's regulations "must accommodate the myriad of incumbent users and systems, as well as take into account the expectations of these users based on previous FCC regulations and policies." Id. at 4. Would that the third pool proposal had taken into account the reliance expectations and needs of American manufacturers.

marketplace, as is discussed in the Fourth Memorandum Opinion and Order staying the shared frequency coordination rule.

Insofar as other industries are concerned, MRFAC is mindful of the fact that much of the petitioners' interference concerns have stemmed from the licensing of new, for-profit private carrier systems. Such systems have an incentive to load their channels to the hilt with users who may not have anything to do with one of the sharing industries.[4] The Commission should consider adopting an eligibility rule that restricts licensing on these channels to the sharing industries, or carriers (for-profit or non-profit) that serve such industries.

2. "Commingling" Is Not a Concern.

Insofar as commingling of auction-exempt and non-exempt applications is concerned, there is simply no issue unless and until each of two separate conditions precedent is satisfied. The first is that mutually exclusive applications be filed. The second is that the auction-exemption in Section 309(j)(2) be limited to only a few types of entities. In the actual event, neither of these conditions applies below 470 MHz.

(a) There Is, and Should Be, No Mutual-Exclusivity.

Private radio spectrum below 470 MHz is shared; no one user has a right to occupy the spectrum to the exclusion of others. Rather, for all users spectrum etiquette and Commission Rules require that users monitor their assigned channel before transmitting and restrict their communications to the minimum necessary.

Consistent with this, the private land mobile community, totaling 275,000

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[4] At UHF manufacturers, forest products and telephone industries shared frequencies with pipelines and utilities prior to consolidation. At VHF manufacturers shared the frequencies with forest products, pipeline and special industrial entities. See Attachment.

companies and more than 10 million radios, has always relied on frequency coordination to tailor individual systems to the existing radio environment. Moreover, private radio licensing utilizes a first-come, first-served approach to licensing: This too precludes the occurrence of mutual-exclusivity.

If this were not enough, Congress has spoken to this very issue in Section 309(j)(6)(E) of the Act. In this Section, the Commission has been directed to use engineering solutions, negotiations and other means (*e.g.* frequency coordination) to avoid mutual-exclusivity before even considering an auction. In light of this express directive, it is puzzling -- as it is troubling -- that the agency should spill so much ink on the issue of whether its authority to conduct auctions overrides its obligation to avoid mutual-exclusivity. API at iii ("if the imposition of geographic licensing were to create mutual-exclusivity where none previously existed, the Commission would be acting in direct violation of its statutory obligation to use various means to avoid mutual exclusivity").

The net effect of all this is to nullify mutual-exclusivity between and among private land mobile applications. Of course, without mutual-exclusivity Section 309(j)'s pre-requisite for an auction does not exist.[5]

(b) Private Radio Systems Are Generally Auction-Exempt.

Even if the clear congressional intent to avoid mutual-exclusivity were disregarded, and a mutually-exclusive licensing regime were imposed below 470 MHz, there would still be no basis for imposing an auction regime. By virtue of Section 309(j)(2), non-

[5] Even the proponents of a separate pool acknowledge that site-specific, first-come/first-served licensing traditionally used for private land mobile applications obviates mutual-exclusivity. See, e.g., AAR at 7 (AAR "has never had to submit mutually exclusive applications to the Commission for resolution" (emphasis in original)). It is for this reason that concerns registered by Association of Public-Safety Communications Officials-International, Inc. (third pool necessary to avoid competition for public safety frequencies by profit-motivated railroads, utilities and pipelines) are groundless. APCO at 8.

governmental uses of the spectrum for internal communications related to the protection of life, health and property are auction-exempt.

The fact is that private wireless spectrum is generally used for safety-related purposes. See, e.g., ITA at 8; PCIA at 6. Indeed, no meaningful distinction can be employed between private, internal-use radio systems and public safety: Private radio uses are intimately related to safety whether those uses be in the coordination of personnel operating blast furnaces in steel mills (Comments of Small Business in Telecommunications at 2), or ground operations in and around airports, or directing the movement of earth-moving machinery weighing over a quarter-million pounds.[6]

Consider, too, the fact that manufacturing often involves hazardous processes and materials that present a clear and present risk to worker safety. For instance, in 1997 U.S. manufacturing suffered 1,662,100 occupational injuries.[7] Radio plays a vital role in protecting and responding to worker injuries.

Radio also plays a vital role in protecting safety generally. For example many large manufacturing complexes provide municipal fire and rescue services for nearby towns and communities. Indeed, such complexes maintain emergency response teams that are the first responders to life-threatening situations in nearby communities. Similarly, many manufacturers

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[6] Proponents of an auction exemption for their particular industries (e.g. AAR, API) take comfort from their mention in the legislative history to Section 309(j)(2). However, that history merely notes that the exemption "includes private internal radio services used by railroads [et al]." It is an axiom of statutory construction that the term "includes" is one of illustration, not limitation. 2A Sutherland Stat Const §47.23 (5th Ed 1992); cf Richardson v. National City Bank of Evansville, 141 F.3d 1228, 1332 (7th Cir. 1998). Thus, the listing in the legislative history is by no means all-inclusive.

[7] By contrast the transportation and utility industries combined experienced one-third as many injuries (477,000). *Workplace Injuries and Illnesses in 1997*, Bureau of Labor Statistics, USDL 98-494, Table 2 (December 17, 1998). If interference-free channels are important to pipeline and utility workers, as petitioners urge and we do not dispute, they are at least as -- if not more -- important for the safety of manufacturing workers.

maintain their own electrical and gas distribution systems: A problem in these systems (*e.g.* in the transport of volatile chemicals on a manufacturing complex) can have profound safety implications for an entire area. Moreover, manufacturers operate under a host of safety (*e.g.* OSHA and EPA) regulations, a number of which mandate immediate availability of radio communications.

As Motorola has observed, it would be "almost nonsensical" to read the safety-related services exemption as applying only to the services explicitly named therein such as railroads and pipelines. Does it make sense, for example, to exempt freight railways, but exclude interstate trucking -- when both may carry the same hazardous materials? Or exempt pipeline control and data systems, but not radios used to coordinate the re-fueling of fully loaded commercial airliners? Id. at 6.

In summary, read properly the Section 309(j)(2) safety exemption also obviates any concern that licensing difficulties will arise as between auction-exempt and non-exempt applications.[8]

3. A Separate Pool Is Not the Answer for Petitioners' Spectrum Access Concerns.

Insofar as spectrum access is concerned, the answer is not to cannibalize spectrum shared with their manufacturing neighbors. Rather, spectrum access is a concern shared by all private radio groups. The solution is to work together with the rest of the private radio community on efforts -- legislative and administrative -- to secure a new allocation. As Motorola

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[8] A number of commenters observe that their radio systems should be viewed as qualifying for the safety exemption, even if not all of the communications are directly responsive to a safety issue. *E.g.* AAR at 6. MRFAC agrees that the Commission should not impose overly restrictive limits on the types of communications transmitted. At the same time, however, the fact that much, if not most, of the traffic carried on a railroad or power radio system may be of a routine business nature underscores the lack of basis for a separate pool.

has observed, "Most of the regulatory tensions that now exist with the private land mobile community can be greatly reduced through increased communications capacity." Comments at 4.[9]

4. A Grant Of The Petitioners' Proposal Would Inflict Severe Injury Of The Manufacturing Backbone of the U.S. Economy.

As discussed above, there is no basis for a third pool below 470 MHz dedicated solely to the railroad, power and petroleum industries. However, far more than this militates against the proposal to exclude other responsible industries that have historically shared these channels.

As noted previously, third pool proponents seek to have their pool stocked with approximately 60 percent of the frequencies that have been the workhorse spectrum for US manufacturers for over 40 years.

For example, the Commission's records show 25,060 manufacturer radio systems with a total of 308,227 transmitters (based on data five years old). At the same time, the records show 11,226 systems and 119,428 transmitters in the forest products industry, and 9,711 systems and 137,640 transmitters in telephone maintenance. This represents a total of 45,997 radio systems and 565,295 transmitters. Wireless Telecommunications Bureau Staff White Paper (December 8, 1996), Appendix B. The vast majority of these systems are located on spectrum shared with pipeline and power companies. See Attachment. In other words, the subject VHF and UHF bands have not only been shared, but are heavily occupied by industries (manufacturers, forest products firms and telephone maintenance) that have come to rely on the

[9] In addition, reasonable measures can be taken to preserve internal-use spectrum from an influx of heavily loaded commercial carrier systems. From the beginning, these have been the systems that have most concerned separate pool proponents, concerns which manufacturers share. See page 6, supra.

continued availability of these bands to satisfy essential communications requirements. Loss of this spectrum would inflict severe injury on the productivity, safety and global competitiveness of these industries and American manufacturers in particular. Consider the following:

During the past decade, U.S. manufacturing has experienced remarkable growth in productivity and competitiveness. For example, from 1992 through 1997, the gross domestic product (GDP) in manufacturing grew by 5.2 percent annually, compared to only 3.1 percent for the economy overall.[10] Indeed, improvements in manufacturing productivity have contributed to 29 percent of the economic growth between 1992 and 1997, the greatest of any sector of our economy.[11] Manufacturing is the single greatest contributor to the GDP.

Directly related to this manufacturing productivity is the improvement of the United States' position in the global economy. For example, in 1986, the United States' share of world exports was 11 percent; in 1997, the U.S. share had increased to 13 percent.[12] Indeed, the United States industrial growth rate is twice that of its nearest current competitor, Great Britain, and far exceeds that of any other industrialized nation.[13]

A few examples illustrate the importance of the VHF and UHF channels at issue here for U.S. manufacturers. For instance, automobile manufacturers make heavy use of these frequencies for the just-in-time delivery of parts and components to the assembly line, for

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10 *The Facts About Modern Manufacturing*, The Manufacturing Institute, at i.

11 Id. at 2. Manufacturing is also the single largest employer of the American workforce: Approximately 18 million people. Id. at 31. Without intending to suggest any lack of importance to other industries, we note that in 1998 the petroleum industry employed approximately 938,600 persons and the railroad industry 472,700. The utility industry including electric, gas, and water employed approximately 1,310,000. *Bureau of Labor Statistics* (September 28, 1999) <http://www.stats.bls.gov>.

12 Manufacturing Institute, at 24.

13 Id. at 26.

production control, and for fire, medical and security purposes. In areas of concentrated manufacturing such as Detroit, it is particularly important that radio frequencies be closely evaluated so as to ensure compatibility. Such coordination has enabled auto plants in this area to minimize the chances of interference where interference, if it occurs, can bring an entire assembly line to a halt (at a cost of thousands of dollars per minute) and jeopardize worker safety.

Caterpillar, Inc., manufacturer of heavy earth moving and material handling equipment, makes extensive use of VHF and UHF frequencies. Among its many time-critical and safety-related applications are the 150 and 450 MHz control of self-guided vehicles that deliver components on a just-in-time basis to the assembly line. Interference to these full-power channels can cost hundreds of thousands of dollars in lost productivity. Moreover, given the sheer size and weight of the machines in use, interference to channels like these can be disastrous.

Logan Aluminum, which operates a rolling mill, makes extensive use of UHF repeaters for voice and data purposes to support the communication needs of its plant fire department and emergency medical technicians/ambulance service. In addition, Logan utilizes UHF frequencies for real-time materials handling purposes and for the remote control of automated vehicles capable of moving 50,000 pound ingots of white-hot aluminum.

The Boeing Company utilizes extensive 150 MHz and 450 MHz repeater systems for a variety of functions including facilities maintenance, transportation dispatch and materials handling, overhead crane operations, and fire and security for its Emergency Operation Centers. As with other manufacturers Boeing's reliance on just-in-time manufacturing is such that any interference to its frequencies can seriously impede overall productivity, and endanger

communications relied on to comply with OSHA safety requirements such as for man-down systems and confined hazardous areas.[14]

The examples could go on, but the point is simple: Manufacturing productivity and safety depends on radio channels. All of this, however, depends on access to adequate radio channels.

Separate pool proponents suggest that they seek only an "equitable" share of spectrum in the VHF and UHF bands. UTC at 27. Generalizations like this are of little comfort to manufacturers that find themselves occupying frequencies reallocated to the petitioners' exclusive pool, or that need additional frequencies for plant expansion, or that plan to open entirely new facilities for which no assignments exist today at all. Given that the principal problem impacting the private land mobile bands is spectrum congestion, loss of the VHF and UHF spectrum that manufacturers have been able to rely upon for harmonious sharing with pipeline and power companies would have severe adverse effects for our industry, our workers, and our economy.

In sum, the proposal is contrary to the public's interest in a robust manufacturing sector. Legitimate concerns for the avoidance of interference and spectrum access below 470 MHz can be adequately addressed by adoption of a contour-overlap-and-waiting-period rule applicable to the industries and licensees which have shared these channels.

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[14] Overhead cranes are a good example of the benefits which radio provides. With older technology overhead cranes were controlled by an operator in an overhead cab, working with one or sometimes two persons on the factory floor. With radio remote control units, the same amount of work can be performed by one operator, resulting in a labor savings on the order of $40,000-$80,000 per crane. In one automobile manufacturer's plant with numerous cranes, the annual savings exceeds $3 million.

At the same time, radio-controlled cranes contribute greatly to improved worker safety. The operator on the floor, who is closest to the load, is in the best position to observe obstacles or hazards; he does to need to rely on hand signals to an operator located high overhead.

B. AUCTION OVERLAY LICENSES SHOULD NOT BE CREATED IN THE 450 MHZ BAND.

The other principal policy issue raised in the opening comments concerns the AMTA proposal to geographically license and auction the 450-470 MHz band. This proposal is no less flawed than that of the separate pool proponents.

The proposal relies essentially on the premise that without carriers the benefits of re-farming will not be realized. But answers to this are already at hand -- one of them suggested previously by AMTA itself. In particular, the time has come for the Commission to adopt AMTA's proposal to require a transition to narrowband technologies in the major urban markets. Manufacturers need access to the new channels that narrow-banding will create.

Secondly, the Commission needs to take action on the LMCC low power plan first proposed in June of 1997. The low power plan has been delayed due to concerns surrounding the effect of high power operations on biomedical telemetry. However, a proceeding has been initiated (ET Docket No. 99-155) that will hopefully lead to a resolution of this issue. Once resolved, the way will be cleared for high power licensing on many of the former low power offset frequencies. Thus, one of the other centerpieces of re-farming will soon be achieved.

Furthermore, the proposal would overlay an auction regime on a frequency band heavily occupied by hundreds of thousands of users and millions of radios. The amount of vacant space available is nil in and around major metropolitan areas. Many thousands of users might have to be relocated under AMTA's overlay licensing approach, each such relocation producing more inefficiencies and regulatory drag on the economy, not to speak of costs for the affected licensees themselves. The transaction costs of undertaking all this are far too great for serious consideration.

The Commission and the private radio community have spent the better part of the past eight years formulating and refining the policies for re-farming the spectrum below 512 MHz. This process is now nearly complete. To embark on the path urged by AMTA would throw users and equipment vendors into renewed turmoil. It would destroy the expectations of a land mobile community that has relied on the Commission's decisions to date to formulate investment plans.[15] As Motorola has observed, "Migrating to an auction overlay environment in the existing private land mobile frequency bands offers huge risks to a service that has proven invaluable to America's safety and economic development." Id. at i.

In short, AMTA's recent proposal goes entirely too far and is also quite premature; it should be considered, if at all, only in connection with a possible new allocation where the agency does not confront a mature band populated with a multitude of existing users.

C. OTHER POINTS

Certain other points raised in the opening comments also deserve brief mention:

UTC argues at some length that the Commission should "ignore" proposals for efficiency-based user fees. In particular, it contends that Congress "considered and rejected provisions authorizing user fees in the Balanced Budget Act of 1997; that there is no reason for the Commission to consider "an unnecessary issue that cannot be resolved without statutory authority"; and that the agency should confine its focus to auction implementation. Id. at 42-43.

UTC is correct, of course, that the Commission does not yet have authority to adopt user fees. But this is no reason not to seek the Commission's support in that effort. To

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[15] PCIA at 4 (adoption of geographic licensing/auctions for the 150 and 450 MHz bands "would wreak havoc on the land mobile industry..."); ITA at 16 ("any attempt to overlay geographic area licenses in [bands at 800 MHz and below 470 MHz] would be an extraordinarily useless exercise").

focus solely on auctions, without an effort to equip the Commission with an alternative spectrum management tool, makes more problematic the chances for securing any new spectrum allocation and is, hence, self-defeating. Thus, while more of the details concerning efficiency-based fees should be spelled out (such as the level of the fees), progress can still be made by helping the Commission build a record for Congress on the public interest basis for such fees. See Notice of Proposed Rulemaking at para. 76 (inviting comment on the subject).[16]

Personal Communications Industry Association ("PCIA") urges that inter-category sharing at 800/900 MHz should be allowed between, inter alia, Business and Industrial/Land Transportation pool channels, on the one hand, and SMRs, on the other hand. Id. at 22-23. Such an approach would accelerate the conversion of scarce internal use spectrum to carrier operations. Moreover, while PCIA makes an effort to distinguish Economic Area from site-based SMRs, in the final analysis such a distinction is unlikely to prove enduring, even if it were persuasive in the first instance.

PCIA also argues in favor of additional responsibilities for coordinators, mentioning specifically assignment of call signs. Id. at 30. Coordinators should be able to fulfill additional responsibilities on a voluntary basis, as long as those responsibilities do not derogate from the Commission's statutory obligations. Assignment of call signs -- a euphemism for licensing -- trespasses on the Commission's core responsibilities under Sections 308 and 309 to license facilities in the public interest. Hence, this specific proposal should not be adopted.

Finally, insofar as the Nextel waiver request is concerned, there is nothing in

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[16] The fact that certain industries may view themselves as auction-exempt (and this includes manufacturers) is no reason not to consider efficiency-based user fees. No industry should view itself as somehow 'above' compensating the taxpayer for the use of newly allocated spectrum (a public resource) in a manner that rewards efficiency and penalizes inefficiency.

Nextel's recent comments that should alter the determination already reached by the Wireless Bureau; namely, allowing Nextel's proposed conversion of Industrial/Land Transportation and Business Channels to SMR use (as opposed to allowing their use for relocation of upper-200 channel licensees) would effectively eliminate any constraint on the wholesale diversion of private radio channels to commercial carrier operations. Such a result would only aggravate the spectrum shortage impacting true private radio users.

III.

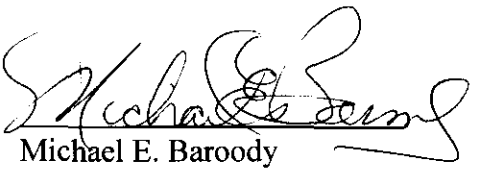
CONCLUSION

In a real sense, the instant proceeding is a "solution in search of a problem." Kenwood Communications Corporation at para. 11. That is, the Commission can solve several

problems at once simply by following congressional directives and not attempting to shoehorn a square private radio peg into a round auction hole. Instead, the Commission should focus its energies on allocating additional spectrum for shared and exclusive, private radio and private carrier, separate pool proponent and non-separate pool proponent, use below 2 GHz.

Respectfully submitted,

NATIONAL ASSOCIATION OF
MANUFACTURERS

By: 

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September 30, 1999

ATTACHMENT

SHARED 450-470 MHz FREQUENCIES[1]

FREQENCIES (MHz)	IX	IF	IS	LX	IB	IP	IW	IT
451.175 - 451.675	10	10				10	10	10
451.700 - 451.750		2				2		
452.200 - 452.275		5		5				
452.350 - 452.450		3		3				
456.175 - 456.675[2]	10	10				10	10	10
456.700 - 456.750[3]		2				2		
462.475 - 462.525	2	2				2	2	2
467.475 - 467.525[4]	2	2				2	2	2

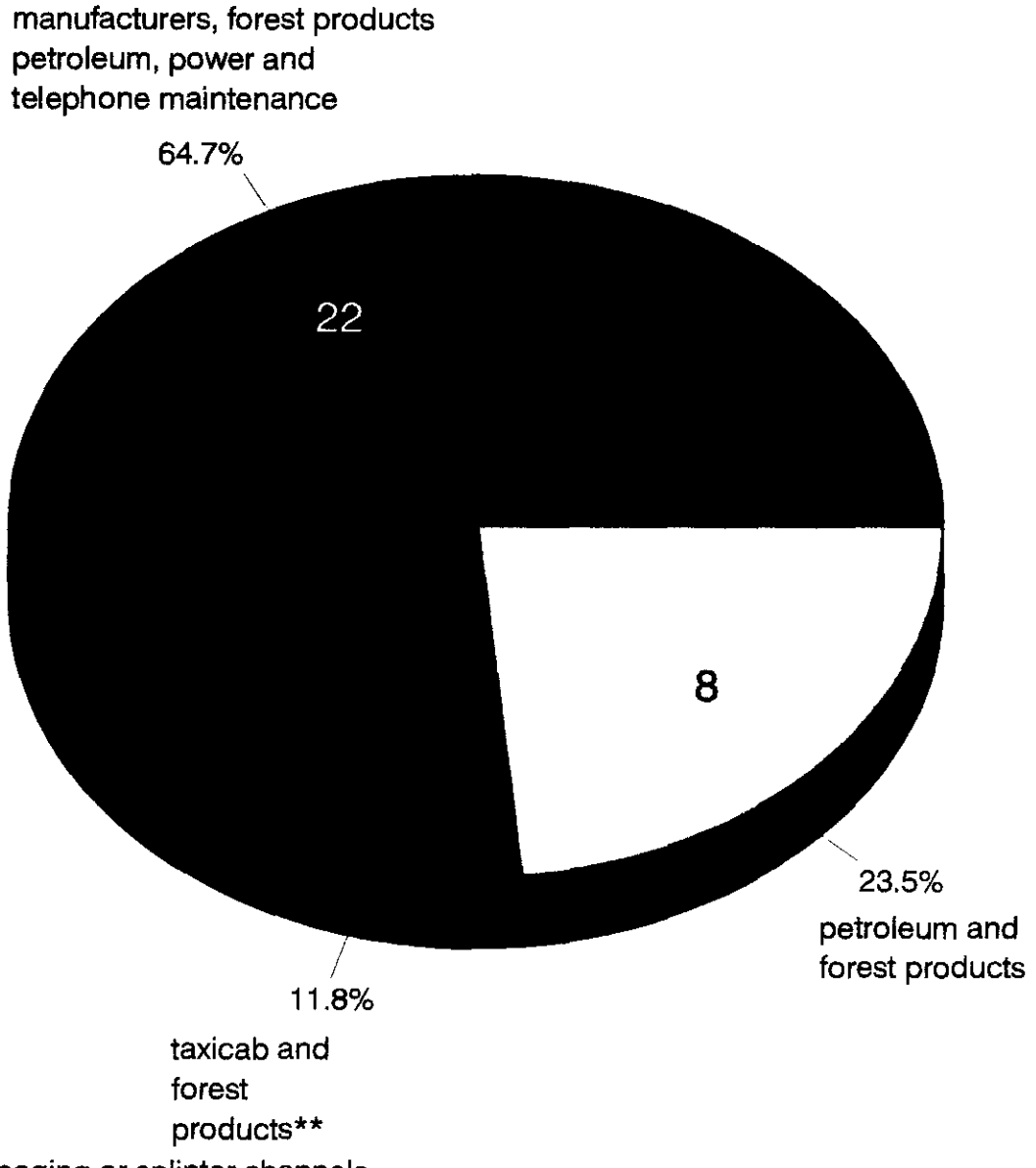
[1] Does not include paging or splinter frequencies

[2] Paired with 451.175 - 451.675

[3] Paired with 451.700 - 451.750

[4] Paired with 462.475 - 462.525

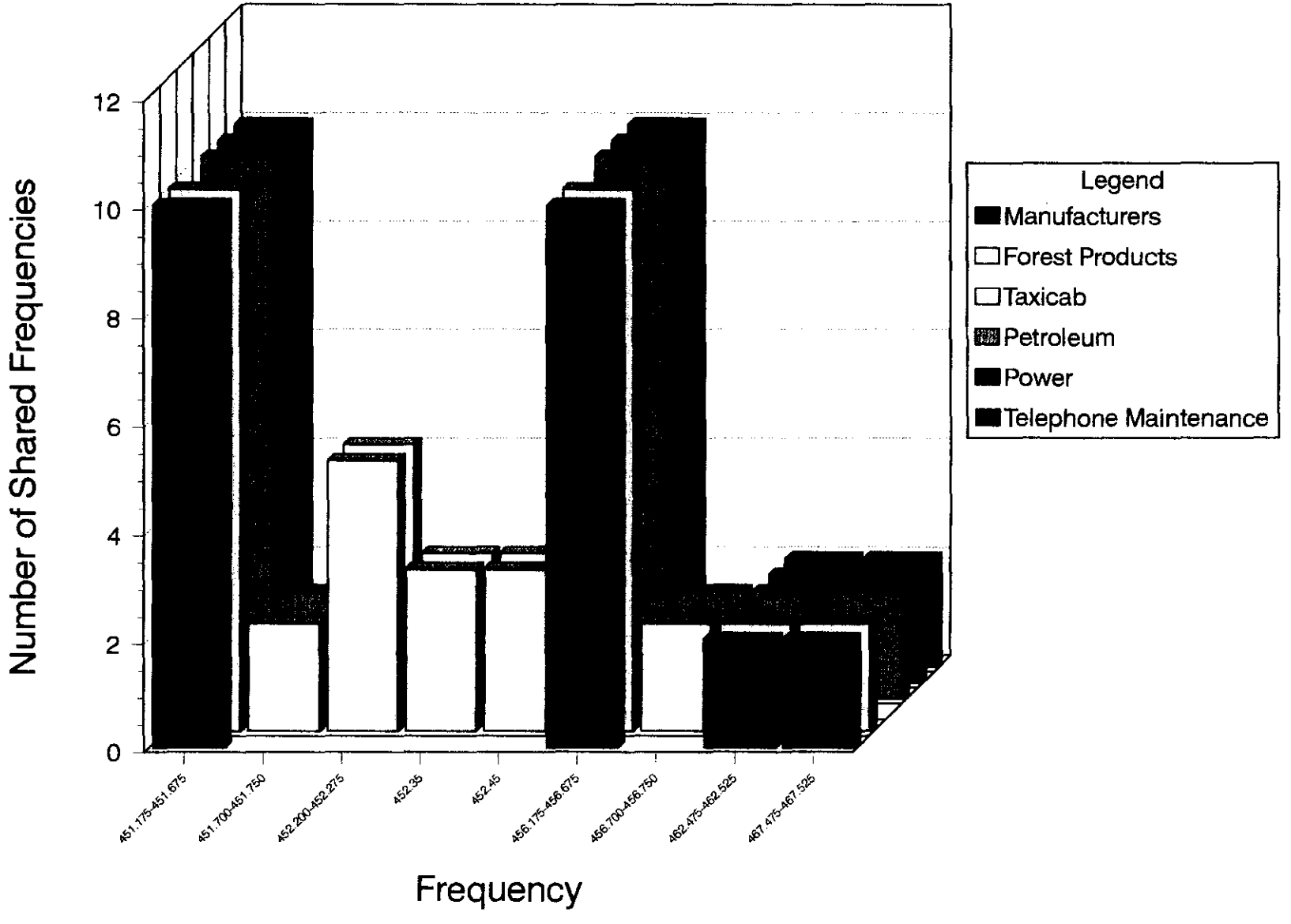
Number of Channels Shared by Specified Services, 450-470 MHz*



*Graph does not include paging or splinter channels

**Channels at 452.100-452.450 and 457.100-457.450 are available for forest products in ID, MT, OR, and WA

Shared 450-470 MHz Radio Frequencies

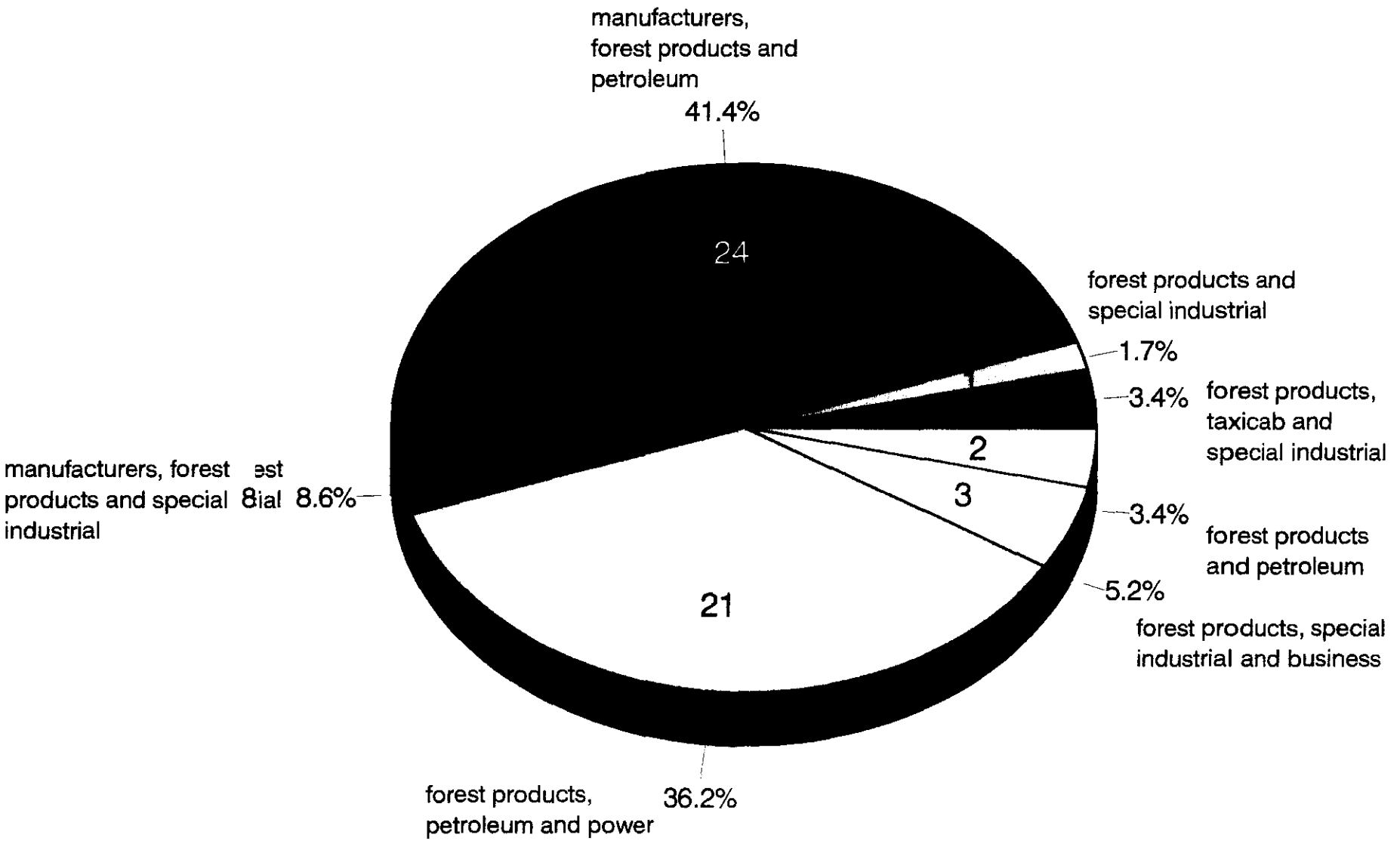


SHARED 150 MHz FREQUENCIES[5]

FREQUENCY (MHz)	IX	IF	IS	LX	IB	IP	IW
152.465		1	1	1			
152.480		1	1		1		
153.050 - 153.320	19	19				19	
153.335 - 153.395	5	5	5			5	
153.425 - 153.680		14				14	14
154.45625 - 154.47875		4					
154.625		1	1		1		
157.725		1	1	1			
157.740		1	1		1		
158.145 - 158.265		7				7	7
158.280 - 158.430	6	6				6	
158.355 - 158.370		2				2	
158.460		1	1		1		

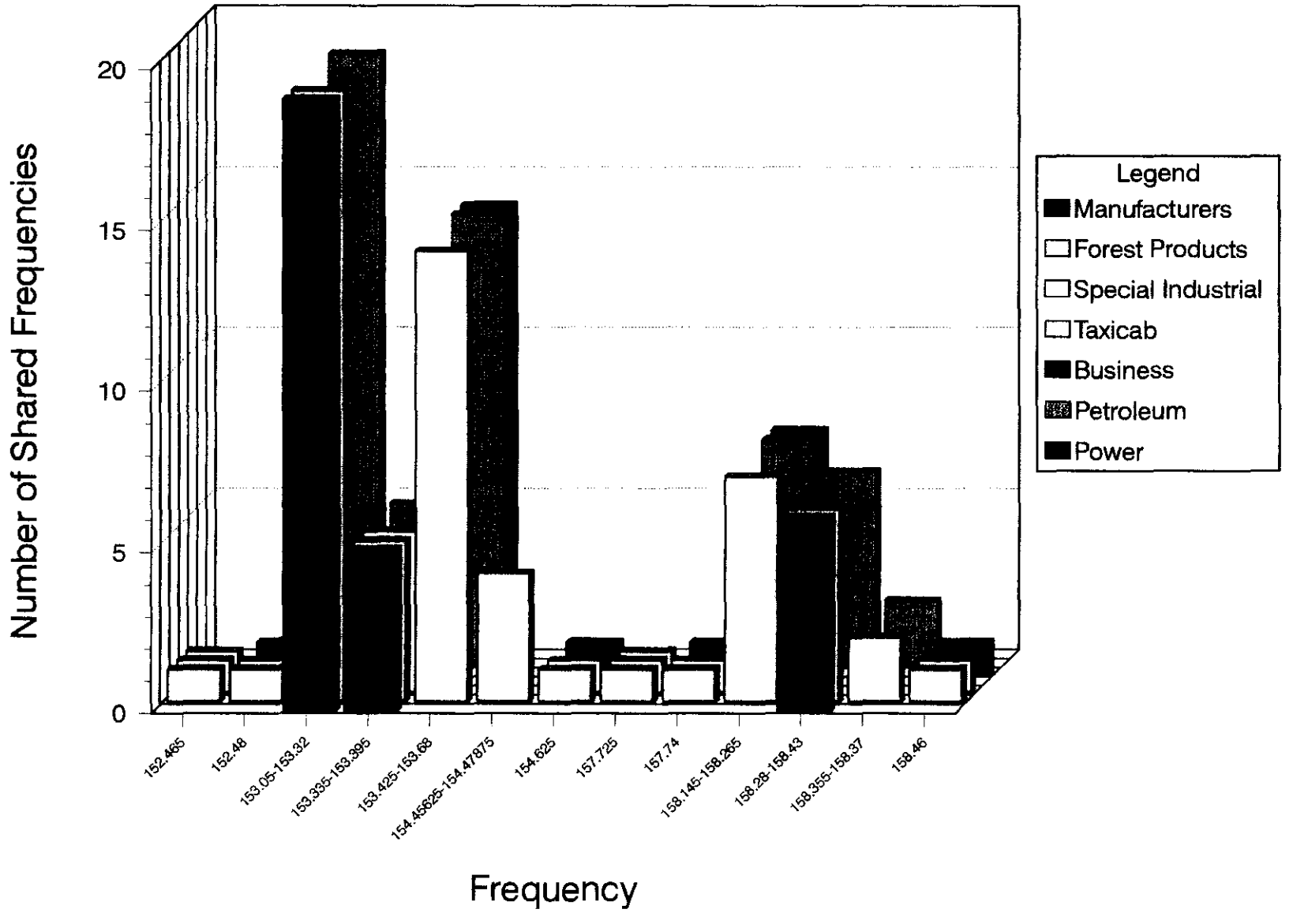
[5] Does not include paging or splinter frequencies.

Number ot of Channels Shared by Specified Services, 150 MHz*



*Graph does not include paging or splinter channels

Shared 150 MHz Radio Frequencies*



*Graph does not include paging or splinter frequencies